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Depreciation of appreciation

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salvage value, taxable value, and insurable value. By liquidation value is meant the amount which probably would be realized if the assets were sold at a forced sale. It usually is true that a forced sale would produce less than could be obtained under normal conditions. Scrap or salvage value is the amount which would be realized if the assets were broken up and junked. Taxable value and insurable value are self-explanatory.

Book value of fixed assets is simply the value at which such assets are carried on the books of a concern. A distinction usually is made between gross book value and net book value. The former means the amount at which the property is carried in the asset accounts. The latter means the gross book value less depreciation reserves built up against the properties to date. Book value may be any one of the values enumerated above, or some other, arbitrary, value.

What generally is recognized as the most rational value at which to carry fixed assets on the books is cost less depreciation based thereon, the depreciation, of course, being carried in a separate account. This procedure is in accord with the important principle of conservatism, in that it avoids booking so-called paper profits arising from appreciation in the value of fixed assets. It is based on the assumption that the function of accounting is to show the actual cost of doing business.

Obviously, it often is desirable to show in financial statements the sound value of various assets at the date of the statement. Such is the case in balance sheets submitted for credit purposes and as a basis for the flotation of securities. The fact apparently is overlooked in many cases, however, that all practical purposes could be served by the use of parenthetical expressions or footnotes to convey to the reader the current value of certain assets, without placing such value on the books.

In any case, no matter at what value fixed assets are carried on the books, it is vitally important that balance sheets prepared therefrom which are to be made use of by others than those intimately associated with the management of the enterprise, state clearly the basis of valuation used. Such meaningless captions as present value, or depreciated value, accompanied by no further explanation, should be abandoned for more lucid descriptions. The uninformed then may determine whether apparently sound values are in reality sound, or otherwise. There then may be no cause for allegations that enough has been kept back to purchase what has been made known; although it may be remarked, incidentally, that the temptation in modern times is to overstate rather than to understate assets.

Depreciation of Appreciation

THE book value of fixed assets frequently is written up from cost so as to reflect a current value. Although the motive for taking appreciation into the accounts sometimes is open to question, in many cases it is the result of a legitimate desire to place on the books bona fide increases in value.

In this connection difficulties sometimes are experienced in charging depreciation on the appreciated assets.

Assume, taking a simple case with small amounts in order to avoid undue involvement, that a machine was purchased in 1921 at a cost of $10,000, with an estimated life of ten years, and a probable scrap value of $1,000 at the end of that time. There would remain the amount of $9,000 to be depreciated over a period of ten years, resulting in an annual depreciation charge of $900. In 1926, at the end of five years' service, the machine would have a net book value of $5,500, represented by its cost—$10,000—less an accumulation of five years' depreciation at $900 a year.

Assume further that an appraisal made in 1926 indicates that because of a rise in prices the sound value of the machine now is considerably in excess of its net book value. Under present conditions it would cost $15,000 to replace the machine new. It still has five years of useful life, and the estimated scrap value of $1,000 is considered correct. On that basis the machine is appraised at $8,000, arrived at by deducting from its replacement cost new—$15,000—depreciation for the five years from 1921 to 1926 at $1,400 a year, computed on the basis of replacement cost new less estimated scrap value.

It is decided to place the appraised value on the books. This involves writing up the net book value of the machine from $5,500 to $8,000, by increasing the asset account to $15,000 and the reserve for depreciation to $7,000, and gives rise to a credit of $2,500. This credit should be made to an account designated by some such title as "Surplus arising from appreciation of machinery" or "Surplus arising from revaluation of plant property"—it should not be made immediately to earned surplus. No matter how sound the appraised value, this appreciation arising therefrom is to be considered for the present merely as an indication of increased value. It is not an immediate income, nor a surplus available for dividends, since as yet it has not been realized. It can be considered as free surplus available for dividends only when and as the increased value of the machine is converted into assets which can be used for the payment of dividends. This may be effected either by direct sale of the machine at its present value, or by recovery of the present value of the machine from customers through increased selling prices of the concern's products. This view is supported by conservative accounting theory, by law in some states, and always by sound business practice.

The machine now has a net book value of $8,000, with five years of useful life remaining, and an estimated scrap value of $1,000 at the end of that time. The depreciation reserve, therefore, must be increased $7,000 during the next five years in order that the net book value of the machine will be reduced to the estimated scrap value of $1,000 when it is retired from service. In other words, $1,400 must be credited annually to the reserve for depreciation of the machine.

There are two methods in common use of making the charges to offset this credit. According to one method, operations would be charged with $900, and surplus arising from appreciation with $500. Thus, although the machine is carried on the books at an appraised value greater than actual cost, operations would be charged with depreciation only on the actual cost of the machine. The surplus arising from appreciation would be charged with one-fifth of the increase in value, and thus extinguished over the remaining five years of the machine's useful life.

According to the second method, operations would be charged with the full amount of depreciation on the appreciated value of the machine; that is, with $1,400 annually. At the same time, an entry would be made to debit surplus arising from appreciation and to credit earned surplus with $500, or one-fifth of the appreciation placed on the books. This latter entry, according to the theory, is made to transfer to earned surplus annually the portion of the appreciation which has been realized by being actually charged to operating expense as depreciation, included in the cost of goods sold, and recovered from customers by way of increased selling prices based on the increased costs.

The second method sometimes is varied to the extent of making the credit of $500 to appropriated surplus instead of to earned surplus. The effect of this procedure is to withhold from surplus available for dividends, and thus to retain in the business, during the remaining life of the machine, an amount by which the cost of replacing the machine when such becomes necessary probably will exceed the original

cost of the machine. This course tends to discourage the use of cash in paying dividends, thus conserving the cash for the replacement of equipment at higher prices. The same result could be achieved in connection with the first method, by transferring $500 periodically from earned surplus to appropriated surplus.

The proponents of the first method described above maintain that the sole purpose of charging depreciation is to prorate or amortize the actual cost of a fixed asset over the period of its useful life. They believe that the statement of operations should show the actual cost of doing business, and that no amount in excess of the actual outlay for a particular service should be treated as a cost or an expense. If it is desirable to withhold earnings in order to provide for the replacement of assets, they say, this should be done by making appropriations directly from surplus. An additional point of their claim is that by charging to operations depreciation based only on actual cost, the depreciation charges from one period to another are uniform, which fact facilitates the use of operating statements for purposes of comparison between different periods. They argue that if it is desired to charge operations with depreciation based on current replacement costs, it would be advisable to have an appraisal made at the end of every fiscal period, which would involve considerable expense and introduce an additional element of uncertainty into the accounts. They admit that, in order to place a concern on a plane with its competitors, the selling prices of its products should be sufficient to allow it a return on its investment stated at current values; but they believe that this factor can be given adequate consideration without complicating the operating accounts by including it therein.

They claim further that the second method described above results in inflation of inventories, and therefore is opposed to the principles of conservative accounting theory. This inflation is said to come about as follows. A part—$500—of the depreciation charge of $1,400 which would result if the second method were applied in the illustration given above, represents depreciation of appreciation to date unrealized. Since the entire amount of $1,400 is charged to cost of manufacture, and cost of manufacture determines the value of inventories, a part of the $1,400, and hence a part of the $500, is included in the value at which inventories are stated. Inasmuch as $500 has been transferred annually from surplus arising from appreciation, to earned surplus, the unrealized appreciation included in the inventories actually has been taken up as a profit and now is represented by earned surplus. Therefore, the inventories include an element of profit.

The proponents of the second method base their argument on the contention that the appreciated value of the machine, rather than its cost, is the amount which the concern should expect to recover as a part of the selling price of its product; and that the logical way to do this is by including in operating expense, and thus in cost of goods sold, on which selling prices are figured, depreciation charges based on the appreciated value of the asset. They say that if the management recognizes, by writing up the book value of its plant, that it is operating with a plant now worth more than cost, it should see the thing through, and recognize also that now it is faced with heavier depreciation charges, and therefore with the necessity of increasing the selling prices of its products, in order to convert the appreciation into current assets and the surplus arising from appreciation into earned surplus available for dividends. They state that this course also is useful in providing a basis for comparison of cost between two units of a plant, one erected at low prices in the past, and the other just recently at higher prices; and between new and old concerns. In most cases, they agree with their opponents that it is inadvisable to revalue fixed assets periodi-

cally and attempt to charge operations with depreciation based on up-to-the-minute replacement costs; their main argument is that once appreciated value is set up on the books, however, it should be recognized in computing depreciation charges. An additional argument sometimes urged is that by using the variation of this method described above, it is possible to accumulate out of earnings, by periodic charges to depreciation, a reserve towards replacing fixed assets at some time in the future at prices higher than original cost. It is contended that it is not only entirely legitimate, but also sound business practice, to accumulate such a reserve out of earnings.

Those in favor of the second method answer the charge that it would result in inflation of inventories by saying that the inventories in reality are not inflated if the appreciated value of the fixed assets is sound; that in almost any event the amount of so-called inflation is negligible and could be provided for by creating a reserve against it, if desired.

The net result of following the first method is simply to reverse gradually the entry setting up the appreciation. It does not affect the operating accounts or the earned surplus.

If the second method were followed, the operating expense would be stated at a larger amount than if the first method were used. However, this excess would be offset by an income credit made to take up as income, and thus to transfer to earned surplus, a part of the surplus arising from appreciation. The net effect on the earned surplus account of following the second method then would be the same as that resulting from the use of the first method, with one exception: there would be a slight discrepancy between the two because of the small amount of appreciation included in the inventories, as described above, resulting from the use of the second method. This assumes, of course, that no matter which method the concern used in handling depreciation of appreciation, it would sell its products at the same price in either case.

Whichever method is followed, it seems obvious that in utilizing cost data for purposes of fixing selling prices of a concern's products, there should be taken into account an allowance for depreciation based on the current cost of replacing the concern's fixed property, if such is higher than the actual cost of the property. This course tends to place a business which has acquired its plant at some time in the past at low cost, more nearly on a level with a business which just recently has erected its plant at higher prices. It tends to give the older concern a slightly higher rate of return on its investment, which may be either a reward for the foresight of its management in acquiring its plant during a period of low prices, or a piece of plain good fortune that prices have risen and a competing concern now is forced to pay more for its property. This assumes, of course, that the higher depreciation charges which the newer concern must meet are not offset by economies resulting from the fact that its plant is composed of more up-to-date equipment, which are not available to the older concern because it has to operate with antiquated machinery.

Aging Versus Ratios

THE interest of recent years in ratios has called forth considerable discussion. How much has been based on theory and how much on practical facts, of course, is difficult to determine. One ratio suggested, namely, that showing the relation of receivables to merchandise, has been rather consistently rejected by practical accountants because to them its conception appears illogical.

The ratio of receivables to sales has been more favorably received since, when used on a comparative basis, it will show the trend with respect to the amount of